

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A standoff bioagent detecting system for detecting an elevated presence of bioagents in the air comprising:

a blaze grating to separate ultraviolet wavelengths provided by a laser source into first and second ultraviolet wavelengths to provide a pair of wavelengths having a wavelength separation therebetween of no more than approximately five nanometers;

an output coupler coupled to the blaze grating to direct the first and second ultraviolet wavelengths to fluoresce an aromatic protein;

a detector to detect first and second fluorescence levels of the aromatic protein received through the output coupler and associated respectively with the first and second ultraviolet wavelengths; and

a system controller to correlate the first and second detected fluorescence levels with atmospheric absorption levels for the aromatic protein at the first and second ultraviolet wavelengths to determine if an ambient threshold is exceeded by a predetermined amount,

wherein the first and second ultraviolet wavelengths have different absorption levels for the aromatic protein which are substantially unaffected by atmospheric levels of the aromatic protein.

2. (Previously Presented) The system of claim 1 wherein the detector comprises avalanche photo diodes to detect the fluorescence levels, and

wherein the system further comprises a collimator to collimate ultraviolet laser light generated provided by the blaze grating and to provide emissions back to the detector.

3. (Previously Presented) The system of claim 1 wherein the system controller is to determine whether the detected fluorescence level indicates that the aromatic protein exceeds an ambient atmospheric level resulting from the substantially simultaneous transmission of the more than one ultraviolet wavelength.

4. (Previously Presented) The system of claim 1 wherein the bioagent has an aromatic-protein shell comprising Tryptophan, and
wherein the range of wavelengths ranges from between approximately 270 and 340 nanometers.

5. (Previously Presented) The system of claim 1 wherein the laser source comprises an array of laser diodes for generating the ultraviolet wavelengths.

Claims 6 – 10 (Cancelled)

11. (Previously Presented) The system of claim 4 wherein the detected fluorescence level indicates a detection of the biological agent, and
wherein the biological agent comprises at least one of Anthrax, Botox, Staphylococcal Enterotoxin B, and Clostridium Perfringens.

12. (Previously Presented) The system of claim 11 wherein the first and second ultraviolet wavelengths are each to excite the Tryptophan below an emission peak of the Tryptophan.

13. (Previously Presented) The system of claim 1 wherein the system controller is to receive a detection signal from the detector approximately proportional to the fluorescence level,
wherein the system controller is to generate a notification signal when the detection signal indicates that a threshold is exceeded.

14. ((Previously Presented) The system of claim 13 wherein the threshold is based on an ambient level of the aromatic protein present.

Claims 15. - 18. (Cancelled)

19. (Previously Presented) The system of claim 1 further comprising a collimator to collimate laser light provided by the blaze grating.

20. (Previously Presented) The system of claim 19 wherein the collimator collimates the laser light for direction toward a suspect cloud in the atmosphere.

21. (Previously Presented) The system of claim 20 further comprising a range finder to determine a distance to the suspect cloud, the system controller to use the distance to determine thresholds for detection based on an absorption-wavelength curve for the aromatic protein.

22. (Previously Presented) The system of claim 1 wherein the laser source comprises a tunable-fiber laser to generate the first and second ultraviolet wavelengths, and

wherein the Blaze grating directs a selected wavelength through the output coupler based on a control signal from a system controller.

23. (Previously Presented) The system of claim 5 wherein the system is a hand-held bioagent detector comprising a compartment adapted to receive batteries for supplying power for at least the array of laser diodes, the detector, and the system controller.

Claims 24 - 27 (Cancelled)